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ABSTRACT

For a cross-cultural comparison of curriculum and career decisions made by high school students in vocational programs in Taiwan and the United States, a random sample of high school students enrolled in vocational education in Taiwan and in 10 selected states in the United States were mailed a self-administered questionnaire. Responses were obtained from 745 of 1,000 U.S. students and 1,477 of 2,000 Taiwanese students. Comparisons were made regarding curriculum choice, career choice, prospect of employment upon graduation, attitude toward continued education and training, and work experience. Some of the significant differences found between the two sample groups included the following: (1) Taiwanese students said that interest and desire to work with technical subjects were two major reasons for their curriculum choice, whereas U.S. students listed ability to succeed and seeing a good future as their main reasons for curriculum choice; (2) Taiwanese students perceived more influence from parents and relatives than did U.S. students in making career choices; (3) teachers and parents were the most important influence on career choice for the Taiwanese students, whereas U.S. students relied on information and advice from counselors and others more than from parents in making career choices; (4) U.S. students also looked for employment opportunity information when they were making their career choices; and (5) U.S. students desired high initial wages, and Taiwanese students desired creative and challenging jobs. The study confirmed that country or culture is a dominant factor influencing student perceptions, expectations, and choices. (16 references) (KC)

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A Comparison of Curriculum and Career Choices of Senior High School Students in United States and Taiwan

ABSTRACT

While considerable research efforts have been made to identify factors which influence high school age students in making curriculum and career choices, little attention in research has been directed to the cultural variable and impacts on such decisions.

This study included a cross-cultural comparison of curriculum and career decisions made by high school students in vocational programs in Taiwan and the United States.

Comparisons were made regarding a) curriculum choice, b) career choice, c) prospect of employment upon graduation, d) perception regarding continued education and training, and e) work experience.

Significant differences were found and the results confirmed that country or culture is a dominant factor which influences student perceptions, expectations and choices.

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INTRODUCTION

When a decision to enroll in a vocational or nonvocational high school program needs to be made, such a decision apparently is influenced by both the school curriculum experiences and career development interest of the student (MSDE, 1989). This decision in making tentative choices with regard to individual curriculum and career, which may have a short- or long-term effect (Copa & Salem, 1981) to the students, represent no easy tasks. Research results found by researchers suggest that these influential factors are complex and interrelated.

However, an absence of understanding of the factors which influence such choices and their effects upon diverse cultural background and educational system prevalently exists as is reflected in several studies. This study attempted to ascertain the degree of knowledge of factors influencing curriculum and career choices by comparing differences between senior high school students in the United States with students in Taiwan regarding these selected factors.

Factors most affecting high school students in making their curriculum and career choices have been documented in a great number of studies. Among the factors frequently listed are influential persons, academic performance, intrinsic reasons, aspiration and expectation toward the curriculum and career. The following discussion narrates these factors in detail.

Influences from personnel are well known as one of the external, influential factors. In which, parental influences have been reported to be the most effective along with influence from peers, friends, and teachers (Alden & Seiferth, 1979; Harrison & Kotrlik, 1989; Kendall & Miller, 1983; Sube, 1981; Vetter et al., 1979; Young, 1985) while guidance services were the

least effective (Alden & Seiferth, 1979; Kendall & Miller, 1983; MSDE, 1989). Specifically, Stone and Wang (1990) discovered that the father and the father's occupation have a positive influence while a negative influence from the mother and her occupation was reported. Additionally, Young (1985) reported that mothers have a most significant influence on daughter's choice while the father on the son's choice. Seemingly, sex stereotyping interacts with parental roles to a certain degree thus influencing student's decision making toward career selection.

This interaction is also evident in the selection process of vocational programs. Kendall and Miller (1983) depicted that students in both traditional and nontraditional vocational programs received more support from the mother than other individuals. However, students in vocational programs have received less support and larger resistance from their parents than students in nonvocational programs (MSDE, 1989), owing to the curriculum or programs selected. Essentially, the students were encouraged by parents to go to college after high school education.

Support or resistance are also proposed by other personnel such as peer, friends, teachers, or counselors (Kendall & Miller, 1983; MSDE, 1989). Results of the review of research indicate that, as an information source, career and curriculum counselors were found providing poor or no services to the students (Alden & Seiferth, 1979; Kendall & Miller, 1983; MSDE, 1989). Interestingly, students, who waited or delayed taking vocational programs, consider themselves as the most instrumental in making this decision (Kendall & Miller, 1983; MSDE, 1989).

Other than influences from personnel, some factors are more intrinsic, such as role model, sex stereotype, individual interests, and ability are

contributing factors which influence students in making their curriculum and career choices to a certain degree. Students readily see their parents as role models which explains parental encouragement or discouragement to be a high influence toward nontraditional career choices (Young, 1985). The long-standing sex stereotype also places a significant influence on student's career choices (Alden & Seiferth, 1979; Young, 1985) or enrollment in a vocational program (Vetter et al., 1979). Vetter and his co-workers (1979) found that occupational sex segregation and related wage disparities are perpetuated although there is an increase of women in nontraditional occupations. Moreover, individual interests and ability are vital in influencing career and curriculum decision making, according to Harrison & Kotrlin (1989) and Vetter et al. (1979).

On the other hand, basic ability was found to be the major contributor to academic performance in terms of grade point average (Compo & Smick, 1988). The study results state that the dropout rate of students in vocational programs is three times that reported in nonvocational programs (MSDE, 1989), It has been speculated that a socioeconomic status factor may have an influence on students academic performance and further decisions in curriculum and career selection (Camp & Smick, 1988; Grimes & Scalise, 1986) although it remains on insufficient and inconclusive documentation. In addition, Noeth et al. (1984) provided support in which the course work identified to be interesting is very helpful in occupational decision making. However, the study did not identify which courses were thought to have been influential.

Another influential factor in making decision for curriculum and career choices is occupational aspiration and expectation (MSDE, 1989). The study indicated that students enrolled in vocational education are more likely to

decide on a career area before graduation. Furthermore, students, whether or not enrolled in traditional or non traditional vocational programs, have a positive perspective and attitude toward the programs or career chosen (Kendall & Miller, 1983). Nevertheless, Camp & Smick (1988) pointed out that enrollment in vocational programs produces reduced occupational aspiration among students when correcting for the effects of gender, socioeconomic status, basic ability, and high school GPA, as pointed out by Camp & Smick (1988). Interestingly, students in both college preparatory and vocational programs displayed a willingness to make the same curriculum and career choices (Kendall & Miller, 1983; MSDE, 1989). Furthermore, Stone (1988) and Stone & Wang (1990) found that participation in vocational programs was positively associated with higher job status attainment by marketing students but was unassociated with career aspirations.

In addition, sex as a socialization factor has been correlated to individual career aspiration and expectation. Young (1985) reported that sex stereotyping vigorously interacts with parental roles to a certain degree as influencing student's decision making toward career selection. In contrast to Farmer's findings (1983), Koski & Subich (1985) reported no differences were found among female and male in career or home commitment. However, the study concluded that females keep suffering from sex segregation existing in the society no matter how strong their commitment toward the career they might have.

Similar reasons influencing curriculum and career choices were found in studies (Harrison & Kotrlik,1989; Kendall & Miller, 1983; MSDE, 1989). Among these factors are: program sounded interesting, need or want to be prepared for a job after high school, prefer practical learning experiences, desire to

learn vocational-technical skills , availability of jobs in this field, and working conditions, salary or wages.

Statement of the Program

While considerable research effects have been made to identify factors which influence high school age students in making curriculum and career choices, little attention has been directed to study the cultural variables and impacts on such decisions

The intention raised then is whether cultural background and the educational system affect high school students in making curriculum and career choices in one nation different from another.

POPULATION AND SAMPLING

The population identified for this study included essentially those high school students who enrolled in voc-ed programs. Students in Taiwan were selected based on vocational high schools in which they participate. The vocational high schools were randomly selected by county and city, including public and private schools. The selected students from these schools were referred to as ROC students throughout this report.

Subjects for this study in the U.S.A. were drawn from the students population that enrolled in comprehensive secondary schools and participated in vocational education programs. State directors were consulted to provide school lists on which relatively comprehensive vocational education programs are offered by the schools. Ultimately, ten states were selected to

participate this study: California, Georgia, Illinois, Indiana, Iowa, Michigan, Minnesota, Nebraska, Ohio, and Oklahoma. This sample contained students which were referred to as USA students. In this study, 1,477 out of 2,000 ROC students and 745 out of 1,000 USA students provided the data for analysis.

The self administered questionnaire method was employed to collect data for this study. English and Chinese versions of the questionnaire were developed. Considerable effort was expended to make the questionnaires equivalent.

Because of systems differences, where ten percent of the item was incomplete, the item was omitted from analysis.

RESEARCH HYPOTHESES

Five hypotheses were posed for this study to determine what factors influenced high school students curriculum and career choices in Taiwan and the U.S. The five hypotheses are:

1. There is no difference in the factors which influence curriculum choice between the Chinese and the United State students enrolled in secondary vocational education programs.
2. There is no difference in the factors which influence career choices between the Chinese and the United State students enrolled in secondary vocational education programs.
3. There is no difference in student's perceptions of the prospect for finding employment upon graduation between the Chinese and the United States students enrolled in secondary vocational education programs
4. There is no difference in student's perceptions toward continued

education and training between the Chinese and the United States students enrolled in secondary vocational education programs.

5. There is no difference in work experience between the Chinese and the United States students enrolled in secondary vocational education programs.

DATA ANALYSIS

Two statistical methods were applied to analyze the data. Chi-square statistics was used to examine differences between countries and each item (for the content of the items refer to Table 1 in Appendix A). To further analyze the data, the log linear model was employed to cross-examine several variables of interests. All tests were evaluated at .05 level of significance.

FINDINGS

Findings from this study were divided into two parts. Part 1, referred to summary analysis for one item at a time, which in effect summarized the results from chi-square tests for differences in each item by country. Part 2 reported findings from a cross-evaluation of several variables using the log linear model. The multiple variate analysis used in Part 2 provides an insight of variations which account for variables other than the country variable.

PART 1: SUMMARY ANALYSIS FOR ONE ITEM AT A TIME

Based on results from chi-square tests, factors which influence curriculum (Table 2) and career choices (Table 4) as well as subjects with higher probability by country (Tables 3, 5, 6, 7, and 8) were summarized as follows.

Hypothesis 1

There is no difference in factors which influence curriculum choice between the Taiwan and the USA students enrolled in vocational education programs.

Table 2. Factors which influence curriculum choice

R.O.C.	U.S.A.
Want to do technical work.	Ability to succeed in technical subjects.
Influence by relatives or parents.	Influence by counselors or teachers.
Gain knowledge & skills to solve technical problem.	See a good future for technical curriculum graduates.
Saleable skills & knowledge needed for employment	A satisfying & fulfilling life style.
	Start a business & be in charge
Interest in working with practical problem and activities.	Ability to succeed in practical subjects.
	Success in Industrial Arts.
Lack of interest/motivation in academic subjects	Preference for particular type of work.

Results reported in Table 2. indicate the high school students in vocational education within Taiwan and USA, are influenced by different factors in making their curriculum choice. Parental influence on curriculum choice is more prevalent with the R.O.C. student.

Students were also asked to rate self perception and subject preference related to curriculum choice.

Table 3. Reported subjects higher probabilities by country - in relation to curriculum choice

R.O.C.	U.S.A.
Rate themselves moderately able or weak.	Rate themselves exceptionally able or able.
Build self-image by means of parental satisfaction or teacher's praise.	Build self-image by means of self-confidence or success from study.
Would not make same curriculum choice	Would make the same curriculum choice again
Science is most helpful to succeed.	Mathematics is most helpful to succeed.
Success in curriculum help to build a good self-image.	
Will not remain in senior high school if voc-ed program is not available.	Will remain in senior high school if voc-ed program is not available.

Student perceptions of self did differ by country as indicated in Table 3. R.O.C. students perceived science as most essential to succeed in vocational education, whereas U.S.A. students rated mathematics as most helpful to succeed. Taiwan students tend to build their self-image by means of parental satisfaction and teacher's praise while U.S.A. students do so by means of increase in self-confidence or success from study.

It can be summarily stated, that students in Taiwan and the United States consider different factors in making a curriculum choice. As reported in previous studies, Basu et al. (1990) the nation is a determining variable.

Hypothesis 2

There is no difference in the factors which influence curriculum choice between the Taiwan and the United States high school students enrolled in vocational education.

Table 4. Factors which influenced occupational/career choice

R.O.C.	U.S.A.
Parents and teacher as source of information.	Counselors as a source of information.
Good prospects of employment.	Adequate information and exploratory experience.
Encouragement from introductory voc-ed courses.	Prospect for earning a good income.
The type of work vocational education students would do.	Influence of previous work experience.
Influence of classmates.	
Continue with the same voc-ed program beyond high school. activities.	

Results reported in Table 4. indicate the high school students in vocational education within Taiwan and U.S.A. are influenced by different factors in making career choices. Information to make career choices comes from different sources. R.O.C. students get information from parents, teachers and classmates while U.S.A. students gain information from counselors, exploratory experiences and previous work experience.

Other variables were examined which influence career choice as listed in Table 5.

Table 5. Reported subjects higher probabilities by country-- in relation to career choice

R.O.C	U.S.A.
Obtain information from teacher to make career choice.	Obtain information from counselors, employment opportunity information, or other source to make career choice.
Cannot obtain adequate information to make curriculum choice.	Obtain adequate information to make curriculum choice.
Prefer manufacturing or government service.	Prefer military service or service work.
Make career choice with moderate difficulties.	Make career choice with no difficulties.
Will continue in the same type of program in advanced study.	Will not continue in the same type of program in advanced study.

The Taiwan student encounters more difficulty in obtaining adequate information to make a career choice than does the U.S.A. student. While R.O.C. students prefer careers in manufacturing or government service, U.S.A. student prefers military or service work.

There are differences between the factors which influence career choices of R.O.C. and U.S.A. vocational education students.

Hypothesis 3

There is no difference in student's perceptions of the prospect of finding employment upon graduation between R.O.C. and U.S.A. students enrolled in vocational education.

Table 6. Reported subjects higher probabilities by country-- in relation to career outlook (Employment Opportunities)

R.O.C.	U.S.A.
Expect to obtain the first job upon graduation wherever the right job is available.	Expect to obtain the first job somewhere in home state.
Expect to get promoted within 1-3 three years at work.	Expect to get promoted within 4 or more years at work.
Will not accept a job in neighborhood with lower wages but training field related.	Will accept a job in neighborhood with lower wages but training field related.
Select job that provides creative or challenging work.	Selected job that the initial wage or the opportunity for advanced training is high.
Prefer to work for old company.	Prefer to work for small company.
Are not optimistic or uncertain about gaining employment upon graduation.	Are very optimistic about gaining employment upon graduation.

There are differences between the R.O.C. & U.S.A. students perceptions regarding the prospects for finding employment upon graduation. R.O.C. students are willing to assume employment wherever the job is available, where work is challenging and preferably on old company.

U.S.A. student prefers to work in one's state, a job related to training, opportunity for advance training and preferably a small company.

Hypothesis 4

There is no difference in student's perceptions toward continued education and training between the R.O.C. and U.S.A. students enrolled in vocational education.

Table 7. Reported subjects higher probabilities by country-- in relation to continued education

R.O.C.	U.S.A.
Intend to continue education immediately after graduation. graduation.	Intend to work a while then continue education after graduation.
Will participate in paid in-plant training or evening classes.	Uncertain about the participation of paid in-plant training.
View the need for continued education.	Uncertain or view no need for advanced education.

The R.O.C. students anticipate continuing their education and training after graduation to a greater extent than the U.S.A. students.

However, both groups of the students recognize the need for continuing their education even if they have to work for a while prior to re-entry into education.

Hypothesis 5

There is no difference in work experience between the Chinese and United States students enrolled in secondary vocational education programs.

Table 8. Reported subjects higher probabilities by country--
in relation to work experience

	R.O.C.	U.S.A.
Have summer work experience.	N	Y
Have work experience that is cooperative education related.	N	Y
Previous work experience is related to curriculum and career choices.	N	Y
Work experience contributes to remain in voc-ed program and insights as a future worker.	N	Y
Work experience reinforces and expands on study in voc-ed program.	Y	N

Key: N - no
Y - yes

The differences between the two sample group of students are perhaps the most pronounced regarding this specific hypothesis.

It was estimated by Ralph Tyler that eighty percent of high school students in the U.S. have experienced paid work experience by high school graduation. Perhaps, this proportion is even higher for vocational education because ten percent of the vocational education students also participate in cooperative education.

SUMMARY

There were differences between the two sample groups of vocational education students from R.O.C. and U.S.A.

Curriculum

R.O.C. students maintain that interest and desire to work with technical subjects are two major reasons for their curriculum choice.

U.S.A. students listed ability to succeed and seeing a good future are their main reasons for curriculum choice. R.O.C. students seem to perceive more influence from their parents, relatives, than do U.S. A. students in making career choices..

U.S.A. students are more likely to be influenced by counselors and their exploratory experiences in industrial arts in making their curriculum choice.

There was limited influence from teachers on curriculum choice.

Careers

For R.O.C. students, teachers and parents were two major sources of information to help them make career choices.

U.S.A. students rely on information and advice from counselors and other individuals than parents to help them make their career choice. U.S.A. students also look for employment opportunity information when they are making their career choices.

Employment Prospect

U.S.A. students prefer to find employment in their own state. R.O.C. students are willing to go wherever there are job opportunities.

U.S.A. students will consider high initial wage in their job selection, while R.O.C. students are more likely to select a job that is creative and

challenging. R.O.C. students prefer to work for an old company, while U.S. A. students prefer to work for a small company.

U.S.A. students were more optimistic about their employment opportunity upon graduation than the R.O.C. students. U.S.A. students having had previous work experience may have contributed to their confidence of securing employment upon graduation.

Continued Education & Training

R.O.C. students are more likely than the U.S. A. students to continue their education after high school graduation. However, they are less likely than the U.S.A. students to participate in in-plant training.

Differences in Work Experience

There was a significant difference between the two sample groups of students. U.S.A. students are more likely than R.O.C. students to have summer or cooperative experience.

It is very clear that the country or culture is a variable which does interact with the factors examined. In planning, implementing or evaluating vocational programs, the context or country where programs operate cannot be overlooked as a cultural aspect by vocational curriculum planners.

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APPENDIX A

Table 1. Brief description of item content

ITEM	DESCRIPTION	ASPECT
6	sister/brother from voc-ed	personal influence
12	relatives from voc-ed	ditto
15	reasons to study voc-ed	ability & prospect
16	personal influence	personal influence
17	self-rating	self-image
18	prospect of curriculum	prospect
19	influential factor	ability
20	program rating	program
21	means of building self-image	self-image
22	source of information	source
23	adequate information	source
24	influence to career choice	career influence
25	help to career choice	source
26	job preference career	influence
27	difficulty of making career choice	ditto
28	continue same voc-ed program	continue education
29	location of first job	job preference
30	time period prior to promotion	prospect
31	job in neighborhood	job preference
32	criteria for job selection	ditto
33	company preference	ditto
34	immediately continue education	continue education
35	deferred continue education	ditto
36	participation of paid training	ditto
37	needs for continue education	ditto
38	summer work experience	work experience
39	cooperative work experience	ditto
40	work in relation to choices	work influence
41	work contribution to curriculum	ditto
42	work contribution to career	work experience
43	work reinforcement to study	ditto
44	making same curriculum choice	
45	making same career choice	
46	optimistic prospect of employment optimism	optimism
47	helpfulness of subject to success ability	ability
48	helpfulness from curriculum	self-image
49	activities outside of class	work experience
50	remaining in high school	program